



NOAA/CMDL/Mauna Loa Observatory AIRS Validation

- Water Vapor Profiles by Raman Lidar (night) and radiosondes
- Temperature Profiles by Lidar (night) and radiosondes
- Ozone Profiles by Ozonesondes
- Total Ozone by Dobson Spectrophotometer (day)

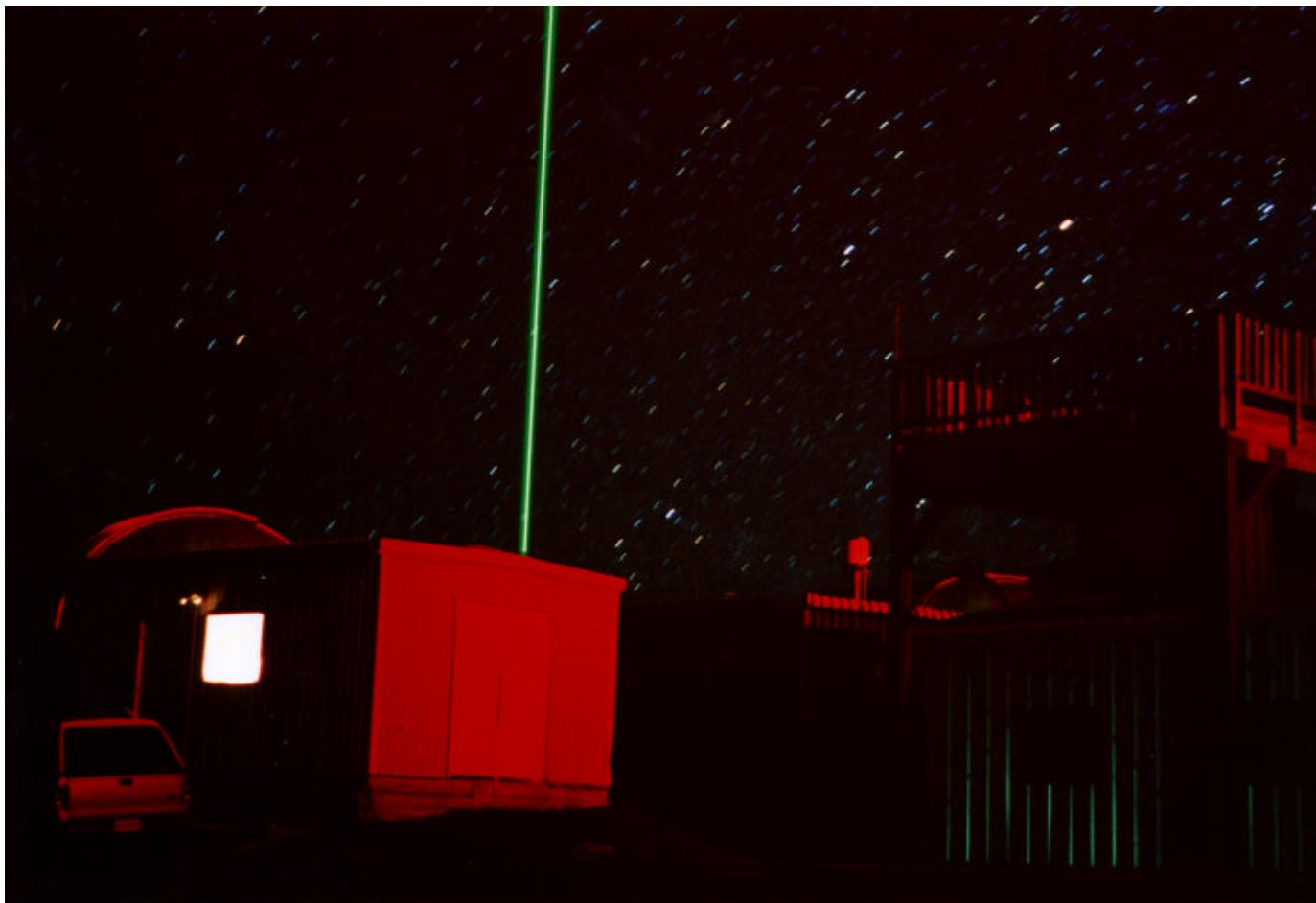
NOAA/Mauna Loa Observatory



MLO Aerosol/Temperature/Water Vapor Lidar

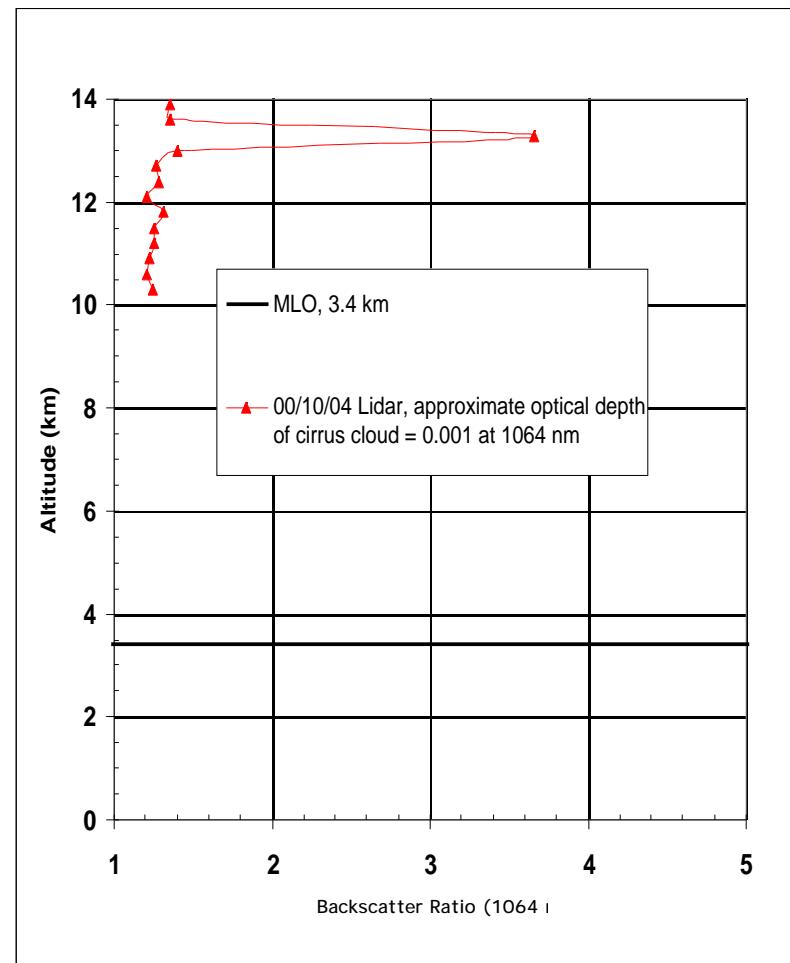
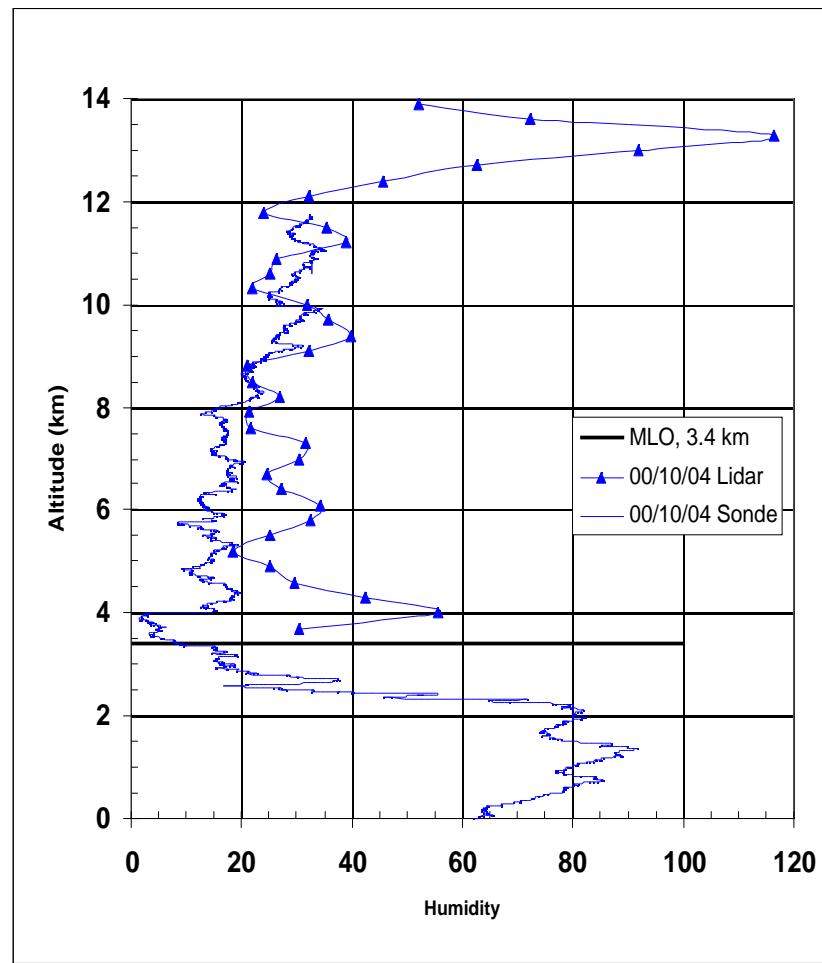
Laser: Nd:YAG (532 nm, 1064 nm, 20 Watts each)

Mirrors: 61 cm (532), 61 cm (1064), 74 cm (607 and 660)





2000/10/4 Observation



Lidar Calibration and Validation

- Five frost-point hygrometers will be flown simultaneous with lidar measurement for calibration of the lidar
- At least 14 measurements of water vapor and temperature made during overpasses each year for validation

Radiosonde and Ozonesonde validations

- Seven radiosondes from the observatory for humidity and temperature each year
- Seven launches of ozonesondes during daytime overpasses for humidity, temperature and ozone each year
- The total daytime column ozone will be measured by Dobson spectrophotometer during daytime overpasses



2000/10/4 Observation

